# Before the Federal Communications Commission Washington D.C. 20554

In the Matter of	)
Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities	) GN Docket No. 00-185
Internet Over Cable Declaratory Ruling	) CS Docket No. 02-52
Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities	) )

Comments of the Rehabilitation Engineering Research Center on Telecommunications Access

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#### **SUMMARY**

The Commission should exercise ancillary jurisdiction to extend the disability safeguards that now exist under section 255 to cable modem service. Two consistent legislative and regulatory goals dictate the need for this jurisdiction. First, both Congress and the Commission have expressly affirmed the need to ensure that individuals with disabilities have the same opportunities to benefit from new and innovative communications technologies that are enjoyed by the rest of the American public. Through section 255 and the many telecommunications access laws that preceded it, these governing bodies have acknowledged the need to "step in" to protect disability access where the market has failed to afford those protections. Second, both Congress and the Commission have repeatedly affirmed their interest in expanding the availability of broadband service to all Americans. The failure to assert ancillary jurisdiction to safeguard disability access to cable modem service will undermine not one, but both of these legislative and regulatory goals.

The failure to implement disability safeguards could also have the undesirable effect of eliminating telecommunications access where it now exists, especially for cable modem services that provide telephone-equivalent functions, such as IP telephony, chat, and video conferencing. These services provide a means of communication that is similar to that provided in narrowband services, in that the content and form of the conversations shared is not changed between the time that the messages are sent by the calling party and the time that they received by the recipient. Thus, when offered to the public for a fee, they are functionally telecommunications services that should be protected by section 255's mandates. This line of reasoning is consistent with the

Commission's recent ruling on IP Relay, in which the Commission considered the *functionality* of this type of relay service – rather than its type of transport – to establish the regulatory framework governing these services.

Broadband services offer various and significant advantages for people with disabilities. Video telephony, IP Relay, and Internet chat services are just a few examples of services that can increase the independence and societal participation of persons with disabilities. However, these services will only improve communications for these populations to the extent they are fully accessible.

A number of access issues already exist with respect to some services provided via cable modem service. Packet switched technologies sometimes increase the error rates of TTY transmissions, compression and expansion of transmissions can affect the quality and intelligibility of speech for people who are hard of hearing or speech disabled, and graphical interfaces can present barriers for persons who are blind or visually impaired. Accessibility measures needed to eliminate these barriers are likely to be readily achievable, but only if they are incorporated as cable modem services are designed and developed. The RERC-TA requests the Commission, through its assertion of ancillary jurisdiction, to require the cable modem industry to consider and include these accessibility features during the design and development stages of cable modem services.

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Comments of the Rehabilitation Engineering Research Center on Telecommunications Access

## I. Introduction

The Rehabilitation Engineering Research Center on Telecommunications Access (RERC-TA) submits these comments in response to the Federal Communications Commission's (FCC or Commission) Notice of Proposed Rulemaking (NPRM) on the appropriate regulatory treatment for broadband access to the Internet over cable facilities.<sup>1</sup>

The RERC-TA is a joint project of Gallaudet University and the Trace Center of the University of Wisconsin, Madison. The primary mission of the RERC-TA is to find ways to make standard systems directly usable by people with all types and degrees of disability, and to work with industry and government to put access strategies into place. The RERC-TA has previously submitted comments to the Commission on broadband issues in response to the

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<sup>&</sup>lt;sup>1</sup> In the Matter of Inquiry Concerning High-Speed Access to the Internet Over Cable and Other Facilities, Appropriate Regulatory Treatment for Broadband Access to the Internet Over Cable Facilities, <u>Declaratory</u>

Commission's Section 706 inquiry concerning the deployment of advanced telecommunications capability to all Americans,<sup>2</sup> the Commission's inquiry on how to classify broadband services that are provided through the traditional telephone infrastructure,<sup>3</sup> and the Commission's inquiry on the application of section 255 to IP telephony.<sup>4</sup> The RERC-TA project is funded by the National Institute on Disability and Rehabilitation Research of the U.S. Department of Education.

## II. The Commission Should Exercise its Ancillary Jurisdiction under Title I to Ensure Access to Cable Modem Service by Persons with Disabilities

A. The Congressional Goals of Ensuring Disability Access and Ubiquitous Broadband Service Provide the Commission with Sufficient Authority to Extend <u>Disability Safeguards to Cable Modem Service</u>

In the Declaratory Ruling in the instant proceeding, the Commission concludes that cable modem service is an interstate information service that does not include a separate telecommunications service offering to consumers.<sup>5</sup> In making this determination, the Commission removes cable modem service from the reach of Title II regulations, and in particular section 255 of the Communications Act.<sup>6</sup> Section 255 requires that telecommunications services and products be accessible to people with disabilities, if readily achievable. Because section 255 primarily covers

Ruling and Notice of Proposed Rulemaking (Dec Ruling and NPRM), GN Dkt. 00-185; CS Dkt. 02-52, FCC 02-77 (rel. Mar. 15, 2002)

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<sup>&</sup>lt;sup>2</sup> In the Matter of Inquiry Concerning Deployment of Advanced Telecommunications Capability to All Americans in a Reasonable And Timely Fashion, and Possible Steps To Accelerate Such Deployment Pursuant To Section 706 of the Telecommunications Act of 1996, Notice of Inquiry, CC Docket No. 98-146.

<sup>&</sup>lt;sup>3</sup> Appropriate Framework for Broadband Access to the Internet Over Wireline Facilities, Universal Service Obligations of Broadband Providers, Notice of Proposed Rulemaking, CC Docket No. 02-33 (rel. Feb. 15, 2002) (Wireline Broadband NPRM).

<sup>&</sup>lt;sup>4</sup> See In the Matter of Implementation of Sections 255 and 251(a)(2) of the Communications Act of 1934, as Enacted by the Telecommunications Act of 1996, Access to Telecommunications Service, Telecommunications Equipment and Customer Premises Equipment by Persons with Disabilities, Report and Order and Further Notice of Inquiry, WT Dkt. No. 96-198, FCC 99-181 (re. Sept. 29, 1999) (Section 255 R&O).

<sup>&</sup>lt;sup>5</sup> Dec Ruling and NPRM at ¶ 33.

<sup>&</sup>lt;sup>6</sup> 47 U.S.C. §255.

telecommunications, not information services, the Commission's classification of cable modem service can have the consequence of eliminating much needed protections for individuals with disabilities.

Notwithstanding the Commission's classification of cable modem service as an information service, the Commission can nevertheless exercise its ancillary jurisdiction to ensure disability access to cable modem service. The Commission itself has noted that federal courts "have long recognized the Commission's authority to promulgate regulations to effectuate the goals and accompanying provisions of the Act in the absence of explicit regulatory authority, if the regulations are reasonably ancillary to existing Commission statutory authority. The Commission seeks comment on whether it should exercise its Title I authority with respect to the provision of cable modem service, and specifically requests comment on "explicit statutory provisions, including expressions of congressional goals" that would be furthered by the exercise of ancillary jurisdiction in this situation 8

The RERC-TA submits that the Commission should, in fact, exercise its ancillary jurisdiction under Title I in order to ensure access to cable modem service by persons with disabilities. As the Commission notes, it has already once before used its ancillary authority to apply disability access rules to information services under Title I.9 Specifically, the Commission has applied its section 255 rules to voicemail and interactive menu services and related equipment, two information services that – like cable modem service – are intertwined with voice telecommunications but that would not

 $<sup>^7</sup>$  Dec. Ruling & NPRM at ¶75, citing federal case law on this point.  $^8$  Dec. Ruling & NPRM at ¶79.  $^9$  Dec. Ruling & NPRM at ¶76 n.295.

otherwise be covered under this section.

In a world where the ability to conduct communications has become essential for participation in every aspect of our lives, 10 section 255 is intended to make sure that people with disabilities have the same opportunities to benefit from our nation's advanced communications services as does the rest of society. In promulgating regulations pursuant to section 255, the Commission acknowledged this congressional goal:

Congress has recognized that, although we are moving into the information age with increasing dependence on telecommunications tools, people with disabilities remain unable to access many products and services that are vital to full participation in our society. The purpose of section [] 255 . . . is to amend this situation by bringing the benefits of the telecommunications revolution to all Americans, including those who face accessibility barriers . . . "11

The Commission concluded that it was Congress's intent for section 255 to provide "access to employment, independence, emergency services, education, and other opportunities,"<sup>12</sup> and that it could not achieve these goals without covering interactive menu and voice mail services.<sup>13</sup> For support, the Commission turned to the case of Mobile Communications Corp. of America v. FCC, in which the U.S. Court of Appeals for the D.C. Circuit upheld an FCC ruling to extend the licensee payment provisions of the Communications Act to a group of licenses not specifically covered by the Act. The Mobile court explained that "a congressional prohibition of a particular conduct may actually support the view that the administrative entity can exercise its authority to

See Section 255 R&O at ¶4.
Id. at ¶1.

<sup>&</sup>lt;sup>12</sup> <u>Id.</u> at ¶4.

 $<sup>^{13}</sup>$  Id. at ¶93.

eliminate a similar danger."<sup>14</sup> Applying this reasoning to section 255, the Commission found that because Congress had signaled its intent to eliminate access barriers to telecommunications, the Commission had sufficient authority to "eliminate a similar danger," i.e., barriers to information services.<sup>15</sup> The Commission's section 255 Order concluded that both interactive voice response systems and voice mail were so essential to the ability of persons with disabilities to effectively communicate, that the failure to require their accessibility would undermine Congress' intent under section 255.

At the same time that both Congress and the Commission have expressly affirmed the need to ensure access to communications technology and services by people with disabilities, so too, have these bodies repeatedly confirmed their intent to ensure "the ubiquitous availability of broadband to *all* Americans. <sup>16</sup> Taken together, these two legislative goals – first, of ensuring communications access by people with disabilities, and second, of ensuring the availability of broadband access to all people, including people with disabilities – lend substantial support for application of the Commission's ancillary jurisdiction for the purpose of safeguarding the needs of people with disabilities. A failure to require access to cable modem service under Title I may effectively undermine not one, but both of these congressional goals. Additionally, as our population ages, and the number of people with disabilities consequently increases, a failure to implement disability safeguards could create the risk that a significant portion

<sup>&</sup>lt;sup>14</sup> Mobile Communications Corp. of America v. FCC, 77 F. 3d 1399 (D.C. Cir. 1996), *cert. denied* Mobile Telecommunication Technologies Corp. v. FCC, 519 U.S. 823 (1996) (Mobile)

<sup>&</sup>lt;sup>15</sup> Section 255 R&O at ¶98. The Commission relied on other D.C. Circuit decisions that had upheld its ancillary authority as well. *See e.g.*, Section 255 R&O at ¶94, citing to <u>Computer and Communications Industry Association v. FCC</u>, 693 F.2d 198, 213 (D.C. Cir. 1982), *cert. denied*, <u>Louisiana Public Service Commission v. FCC</u>, 461 U.S. 938 (1983).

<sup>&</sup>lt;sup>16</sup> Dec Ruling & NPRM at ¶4, 73 (emphasis added). In the instant proceeding, the Commission has stated that this latter mandate should be first and foremost in guiding the development of its regulatory policies on cable modem service. <u>Id.</u>

of the older population will lose access to telecommunications. Given both Congress's and the Commission's paramount interest in preserving such access – as evidenced by a host of federal access laws and regulations discussed below – it is incumbent upon the Commission to use its Title I authority to preserve the public's interest in ensuring access to broadband services by people with disabilities.

### B. Market Forces Will Not Provide Safeguards for People with Disabilities

Competitive market forces will not, absent Commission action, provide the protections needed to ensure access by individuals with disabilities. In the past, the failure of the market to ensure disability access has repeatedly prompted both Congress and the Commission to take legislative and regulatory action to protect these interests. Passage of multiple pieces of legislation, including the Americans with Disabilities Act's requirement for relay services, the Hearing Aid Compatibility Act's requirement for compatible wireline phones, and section 255's mandates for telecommunications access only came after the market failed to address the needs of people with disabilities, and the Legislature found no other choice but to intervene to meet those needs. In fact, section 255 imposed *new* mandates on the telecommunications industry at a time when Congress was largely focused on deregulating that industry, precisely because Congress recognized that without those mandates, people with disabilities would not be afforded the safeguards they need to lead independent and productive lives. In a similar vein, in its Part 68 proceeding, the Commission concluded that regulatory safeguards to protect the needs of individuals with disabilities outweighed a competing interest in deregulation. In that proceeding, although the Commission eliminated most of its technical criteria and oversight of customer premises equipment connected to the public switched telephone

network, it retained those sections of Part 68 that pertain to disability access. The Commission explained that its Part 68 rules on hearing aid compatibility and volume control are "intended to ensure that individuals with hearing and speech disabilities have access to telecommunications services in a manner functionally equivalent to someone without such disabilities," and that retention of these rules would "ensure that the Commission is able to continue monitoring and enforcing compliance with [the] requirements . . . directed by Congress in Section 255 of the Act."

The Commission has also, on more than one occasion, specifically recognized that market forces may not be enough to guarantee timely access to high speed Internet services for Americans with disabilities. In its Second Report on broadband access, the Commission identified persons with disabilities as a category of Americans "who are particularly vulnerable to not having access to advanced services." Again in its Third Report assessing the deployment of high speed services, the Commission acknowledged that individuals with disabilities may face "significant impediments" with respect to gaining access to broadband services. The Commission's concerns, as expressed in these reports, are valid and should be addressed through Commission action that ensures the benefits of high speed Internet access for people with disabilities.

C. The Relationship between Cable Modem and Wireline Service Supports the Exercise of the Commission's Ancillary Jurisdiction

The Commission asks whether the relationship between cable modem service to

<sup>&</sup>lt;sup>17</sup> In the Matter of 2000 Biennial Regulatory Review of Part 68 of the Commission's Rules and Regulations, Report and Order, CC Docket No. 99-216, FCC 00-400 (Nov. 9, 2000) at ¶66.

<sup>&</sup>lt;sup>18</sup> Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion, Second Report, CC Dkt. No. 98-146, 15 FCC Rcd 20913 (2000) (Second Report) at ¶234.

<sup>&</sup>lt;sup>19</sup> Deployment of Advanced Telecommunications Capability to all Americans in a Reasonable and Timely Fashion, CC Dkt. No. 98-146, Third Report, FCC 02-33 (2002) (Third Report) at ¶103.

services provided by wireline common carriers should provide an additional basis for exercising ancillary jurisdiction over cable modem service. 20 We submit that in fact, the functional relationship between these two types of services provides substantial support for utilizing the Commission's authority under Title I to safeguard disability protections. Specifically, certain cable modem services, such as IP telephony, videoconferencing, and chat services, are used for the simple carriage of communications between and among individuals; in these instances, cable modem service is enabling communications that are parallel to those provided through narrowband telecommunications services. In both instances, the content and form of the conversations shared are not changed in any way between the time that the messages are sent by the initiating or "calling" party and the time they are received by the recipient. Indeed, where cable companies use their own transmission facilities, the transport technology underlying their Internet access services is, in fact, a telecommunications service when provided to the public for a fee. Thus, cable modem service actually provides both information services and telecommunications services to the public, depending on the function offered. When Congress enacted section 255's disability mandates, it did not direct the Commission to distinguish between conversations that would take place using one type of wire versus another. Should the Commission fail to apply section 255 to communications that take place via cable modem service, as our society migrates from traditional wireline telephone services to broadband Internet transport technologies, consumers with disabilities will find that the protections that were available to them under the more traditional transport technologies disappear because newer telecommunications services use technologies that the Commission has chosen to exempt from its regulations.

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<sup>&</sup>lt;sup>20</sup> Dec. Ruling & NPRM at ¶79.

In its recent proceeding on Internet Protocol (IP) relay services, the Commission wisely recognized the benefits of considering the functionality of a particular communications service in establishing the regulatory framework for that service.<sup>21</sup> Specifically, in its recent Declaratory Ruling on IP Relay, the Commission found that Congress had broadly defined the term "telephone transmission services" to include relay service carried over the Internet because such term was constrained only by the requirement that such service provide a specific functionality – i.e. that the service enable an individual with a hearing or speech disability to communicate by wire or radio with a hearing individual in a manner that is functionally equivalent to individuals using voice communication services. Relay service, the Commission concluded, is technology neutral, and "encompasses all types of transmission using telephonic equipment or devices, whether over the public switched network, cable, satellite, or any other means so long as the requisite functionality is provided."<sup>22</sup> Similarly, here, the Commission should consider the communications functionality of the cable modem service for people with disabilities and apply section 255 to these communications pursuant to its Title I authority.

D. The Commission Should Ensure Disability Access to All Forms of High Speed Internet Access

The Commission asks whether the findings and decisions that it reaches with respect to ancillary jurisdiction in this proceeding should impact its findings and

<sup>&</sup>lt;sup>21</sup> In the Matter of Provision of Improved Telecommunications Relay Services and Speech-to-Speech Services for Individuals with Hearing and Speech Disabilities, Petition for Clarification of WorldCom, Inc., Declaratory Ruling and Second Further Notice of Proposed Rulemaking, CC Dkt. No. 98-67, FCC 02-121 (rel. April 22, 2002). <sup>22</sup> Id. at ¶10.

decisions in its wireline high speed broadband access proceeding and vice versa.<sup>23</sup> The RERC-TA believes that the Commission should, in fact, assert its ancillary jurisdiction under Title I to extend the reach of section 255's disability mandates to all types of high speed Internet service, regardless of the transport technology used – cable, satellite, DSL or other landline or mobile high speed service. It would make little sense and cause great confusion to afford access to some of these transport technologies and not to others.

## III. Accessibility Issues Already Exist with Respect to Broadband Technologies

Our concerns with the failure of market forces to safeguard accessibility for individuals with disabilities as our nation migrates to broadband technologies are not unsubstantiated. Accessibility problems already exist with respect to several of these technologies. For example, it is not uncommon for TTY text that is transmitted over IP telephony to be garbled or to contain errors at the receiving end, as result of the compression, expansion, and (depending on the transmission protocol) packet losses that take place during Internet transmittals. Similarly, the ability of individuals with hearing or speech disabilities to communicate can become difficult, if not impossible, when either speech is greatly compressed or speech data are lost or delayed during Internet transit.<sup>24</sup>

Moreover, although wireline phones have compatible flashing ring indicators that alert deaf persons as to the existence of an incoming call, at present, manufacturers typically do not incorporate technology that provides a corresponding means of notifying such individuals that they are receiving a call on a computer network or on digital PBXs, without retrofitting to an analog connection. To the extent that the technology exists to

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<sup>&</sup>lt;sup>23</sup> Id. at ¶78.

This could also make Internet communications difficult for people who are deaf or hard of hearing and who use voice carryover (VCO). VCO allows an individual who has speech but lessened hearing, to speak by phone directly to another party, and to receive text back through a TTY or a relay operator.

provide these alerts, or to the extent that such technology is readily achievable, these devices should be made readily available to consumers who need them.

Concerns have also been raised about the ability of individuals who are blind and visually impaired to access broadband services, such as IP telephony. For example, access to certain high speed Internet services is provided through graphical interfaces which sometimes are, and sometimes are not accessible to people who are blind. Multimedia telecommunications that assign some functions and controls to the sense of vision and some to the sense of hearing, without providing redundancy in modes, pose new barriers to people with vision and/or hearing disabilities. Without a requirement that these functions be accessible, developers may – as many do now – fail to design and implement these functions in an accessible fashion.

## IV. Broadband Services Offer Significant Advantages for People with Disabilities

In this proceeding, the Commission notes the significant advantages that cable modem service can offer. The ability to connect to the Internet at lightening speeds and to have an always-on connection allows subscribers to send and view content with far less transmission delay, permits the use of highly sophisticated "real-time" applications, and enables the viewing of streaming video at higher resolutions and on greater areas of the screen. As the RERC-TA noted in comments it submitted in the Commission's wireline broadband proceeding, the need to ensure that broadband access services are available and accessible to people with disabilities is evidenced by the extraordinary reach that broadband services will soon have in our society. These services are already permeating our businesses, schools, homes and lives. If made accessible, broadband can

<sup>25</sup> Dec. Ruling & NPRM at ¶10.

<sup>&</sup>lt;sup>26</sup> Comments of RERC-TA on Wireline Broadband NPRM at 12-14.

offer significant benefits for individuals with disabilities. The following are just a few examples of how broadband can be used as a transport platform to facilitate communications by people with disabilities:

- Voice traffic could include, as part of standard implementation, an open-standard two-way text protocol. This would enable any two parties who have screens and keyboards on end-user equipment to carry on both text and voice conversation. This protocol would permit direct communication among deaf and hearing people without the use of TTYs or relay services. TTYs have provided a reliable method of text communication in analog telecommunications, but they require the purchase of specialized equipment, are very slow, and do not allow users to interrupt each other while conversing. When additional people and businesses have access to broadband pipelines, the current population of TTY users will have greater opportunities to conduct direct text chat with people who do not have TTYs.
- Voice and text could easily be transmitted in a way that supports simultaneous voice and text. This would improve VCO and hearing carryover (HCO) services used by deaf, hard of hearing, and speech disabled individuals.<sup>27</sup>
- Video telecommunications via broadband services, often via cable modem, is now permitting people who are deaf and who use signing as their primary mode of communication, to communicate either with each other directly or with hearing people through video relay services. The ability to carry on telephone conversations via sign language over broadband access services can finally afford signing deaf people the opportunity to experience natural phone interactions that they have never been able to enjoy with traditional telecommunications technologies. For example, in our group at Gallaudet, video relay service permits a deaf engineer to participate in highly technical conference calls with the wireless industry. At last, deaf people are beginning to experience "functionally equivalent" telephone services as intended by Congress in Title IV of the Americans with Disabilities Act. For people who are hard of hearing and need to see the speaker (a sizeable portion of the elderly population), video can also offer the opportunity to read lips and see facial expressions. Finally, video can be useful to people who have speech disabilities but not enough motor skills to type; their speech could naturally be augmented by visual cues such as facial expressions, gestures, and the use of communication aids.
- The ability to conference in more than one party on any broadband call can make it easier for calls to be assisted by a third party (interpreter, captioner, speech-to-speech assistant) on the same call.

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<sup>&</sup>lt;sup>27</sup> VCO is described at n.24 *supra*. HCO enables an individual with hearing, but with difficult-to-understand speech, to convey his or her part of the conversation in text and hear back the conversation conveyed by the other party.

- Individuals who rely on relay services can now use broadband to access relay centers via the Internet. IP Relay offers access to relay services from any portable device that can access the Internet, including computers, PDAs, and Web-capable telephones. Additionally, it enables multiple conversations to take place at once, and offers the convenience of computer-initiated rather than TTY-initiated calls. But the FCC's ruling that IP relay is a reimbursable telecommunications relay service will only be beneficial to relay consumers to the extent that this service is readily accessible and easy to use.
- High speed access to the Internet facilitates the use of Internet chat. Many individuals who are deaf or hard of hearing use chat services as an accessible means of carrying on real-time conversations, i.e., as a near-functionally-equivalent service to voice telephony. Chat services are an excellent alternative to conference calls. As a result, these services have become critical for individuals in the work environment, and as a means of establishing regular communications with friends and family.

In order to enable people with disabilities to benefit from broadband services in the above fashions, broadband service providers need to be sure that the hardware and software they install will not inadvertently distort or deny the above features or other new features that may emerge to improve functional equivalency. For example, broadband voice services, particularly those that terminate in a voice telephone (where access to visual Internet alternatives such as chat services would not be available) should support TTY text which is carried over these services. Alternatively, broadband services need to enable the widespread use of products and implementation of standards that permit text chat among people with and without disabilities.<sup>28</sup>

Additionally, just as our narrowband public switched network offers interoperability and nationwide consumer choice for voice telephony, cable modem service providers need to ensure the widespread availability and consumer choice of chat and other ISP communication services for individuals who rely on these services for communication. The ability to choose one's ISP is critically important to consumers with

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<sup>&</sup>lt;sup>28</sup> The use of text chat would be greatly enhanced by widespread implementation and support of ITU Recommendation T. 140, a plain text chat protocol, in all digital communications environments.

disabilities, just as the ability to choose one's local and long distance telephone carrier is important to the general public. While, at present, "click through" access, for the most part, enables consumers to travel freely over the Internet, should a user with a disability be required to use a cable modem provider's ISP, and that ISP restricted Internet travel in any manner, the ability of that user to achieve effective communications would be severely compromised. Safeguards are needed to prevent this from occurring.

Attention also needs to be directed to ensuring that blind and visually impaired users of wireline broadband services, as well as those with other disabilities, have access at various stages of using broadband services – i.e., when submitting an application for such services, during installation, and when interfacing with these services once they have achieved a connection. Alternatives to touch screens, graphical icons, text and pointing devices are needed to offer functionally equivalent broadband services to these individuals. These and other accessibility measures are more likely to be readily achievable under section 255 if they are adopted at the time that new broadband access services are first designed and developed. Indeed, most of the above accessibility provisions can be incorporated during these early stages at reasonable costs. Conversely, the failure to consider these access needs early in the design and development of broadband services may result in inaccessible services that will be burdensome and expensive for industry to retrofit later on.

#### IX. Conclusion

Access to high speed Internet services, and in particular cable modem services is critical if individuals with disabilities are not to be left behind as the rest of the nation surges ahead in the use of new and innovative methods of achieving communications.

The Commission notes that, with 68% of residential subscribers, cable modem service is the high speed Internet technology most frequently subscribed to among Americans.<sup>29</sup> Access to this service is thus indispensable for Americans with disabilities wishing to fully participate in the mainstream of our nation's communications infrastructure.

Both Congress and the Commission have consistently recognized the need for governmental intervention to ensure that the benefits of our nation's advanced communications technologies reach persons with disabilities. The RERC-TA asks the Commission to again step in, through exercise of its ancillary jurisdiction, to extend section 255's protections for disability access to cable modem service.

Respectfully Submitted,

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<sup>&</sup>lt;sup>29</sup> Dec. Ruling & NPRM at ¶9.